The opinion in support of the decision being entered today was <u>not</u> written for publication and is <u>not</u> binding precedent of the Board.
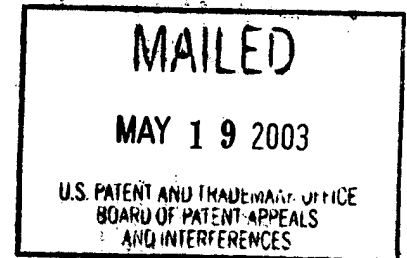
Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

<u>Ex parte</u> ROBERT DOYLE, LAIRD C. WILLIAMS,
KENNETH W. FERTIG,
XUEMEI WANG and N. SERDAR UCKUN

Appeal No. 2001-1703
Application No. 09/300,676

MAILED

MAY 1 9 2003

U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

ON BRIEF

Before THOMAS, KRASS, and BARRY, <u>Administrative Patent Judges</u>.

KRASS, <u>Administrative Patent Judge</u>.

<u>DECISION ON APPEAL</u>

This is a decision on appeal from the final rejection of claims 1-38, all of the pending claims.[1]

---

[1]We note that claim 33 improperly depends from itself. It may be that appellants intended the claim to depend from claim 32, but we leave it to appellants and the examiner to correct.

1

The invention is directed to an automated call distribution (ACD) system for routing calls based on the skill of an agent to take those calls. While such systems, in general, are known, the instant invention determines a target occupancy matrix including occupancy for each agent for each call type of a plurality of calls, processes a call of a first type determined in the matrix and then assigns the call to an agent with the largest relative difference between an actual occupancy of calls of the first type handled by the agent and the target occupancy of calls of the first type determined for the agent in the matrix.

Representative independent claim 38 is reproduced as follows:

38.   A method of assigning a plurality of agents to incoming calls by an automatic call distributor, such method comprising the steps of:

    determining a target matrix specifying a mix and proportion of call types to be handled by each agent of the plurality of agents;

    receiving and assigning calls based upon the mix and proportion of call types specified in the target matrix with agent selection based upon an actual occupancy of the target matrix by the agent and a relative difference between the actual occupancy and the target matrix.

The examiner relies on the following reference:

Tonisson   5,903,641   May 11, 1999
                                                  (filed Jan. 28, 1977)

Claims 1-38 stand rejected under 35 U.S.C. § 102 (e) as anticipated by

Tonisson.

Reference is made to the briefs and answer for the respective positions of

appellants and the examiner.

OPINION

Anticipation under 35 U.S.C. § 102(e) is established only when a single prior art

reference discloses, expressly or under the principles of inherency, each and every

element of a claimed invention as well as disclosing structure which is capable of

performing the recited functional limitations. RCA Corp. V. Applied Digital Data

Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984); cert.

dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. V. Garlock, Inc., 721

F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851

(1984).

The examiner contends that Tonisson discloses a method of assigning agents of

an ACD to incoming calls of a plurality of call types, including the step of determining a

target occupancy matrix including a target occupancy for each agent for each call type

of the plurality of call types and processing a call of the first type of the types

determined in the target matrix (referring to column 2, lines 15-27). The examiner then

3

points to column 2, lines 27-57 and column 5, lines 11-18, of Tonisson for the teaching

of assigning the call to an agent of the agents of the ACD with the largest relative

difference between an actual occupancy of calls of the first type handled by the agent

and the target occupancy of calls of the first type determined for the agent in the target

occupancy matrix.

For their part, appellants argue that Tonisson does not disclose a target

occupancy matrix, as claimed, and that Tonisson's logging of an agent "into and out of

a skill queue is different than assigning calls based upon the relative difference

between an actual occupancy of calls handled by an agent and a target occupancy of

calls in a target occupancy matrix" [principal brief-page 5]. That is, appellants point out

at page 2 of the reply brief, "Assignment of the first call from one of the call queues to

agents, as they become available, is clearly not the same as 'assigning the call to an

agent...with a largest relative difference between an actual occupancy ... and the target

occupancy'."

The term, "actual occupancy" is defined at page 6 of the instant specification as

"the amount of time an agent has spent on a particular work type divided by a time of a

reporting period." A "target occupancy" matrix is created to allocate portions of agents'

time to each call type, based on the agent skill in handling that call type (see page 5 of

4

the specification). A target occupancy matrix is shown at Table I and an actual

occupancy matrix is shown at Table II on page 6 of the specification. As an example,

and in accordance with the instant claimed invention, agent 4 would be assigned the

next call for work type #1 since this agent has the greatest relative difference (20%)

between the actual occupancy (50%) and the target matrix (70%).

As the examiner points out, column 5, lines 11-18, of Tonisson makes it clear

that Tonisson calculates optimum proportions for allocation of agents to skills and calls

are distributed to agents so that the call loads match the desired proportions. This is

achieved in Tonisson by storing the percentage of time spent by each agent handling

calls in each skill in the last predetermined period of time and distributing calls to agents

in such a way as to bring the percentages closer to the ideal.

Thus, it sounds like Tonisson is looking at the differences between an actual

percentage of time spent by agents (i.e., actual occupancy) on a particular skill and an

ideal percentage(i.e., target occupancy). This appears to be the same factors

considered by appellants in assigning agents to incoming calls, i.e., to bring the

percentages closer to the ideal. However, whereas Tonisson will shift agents in and out

of a call queue in dependence on whether or not the actual occupancy exceeds the

target occupancy, i.e., if actual exceeds target occupancy, the agent is shifted out of the call queue and if target exceeds actual occupancy, the agent is shifted into the call queue, the instant claimed invention relies on the "relative difference between the actual occupancy and the target matrix" notwithstanding which one of the actual occupancy or the target occupancy is greater.

With regard to instant independent claim 38, we fail to find a difference between the broadly claimed subject matter, where agent selection is "based upon an actual occupancy...and a relative difference between the actual occupancy and the target matrix" and that disclosed by Tonisson where distribution is performed in such a way "as to bring the percentages closer to the ideal." Since Tonisson is closing the gap between the ideal occupancy percentage and the actual occupancy percentage, the selection of an agent is based on the actual occupancy and a relative difference between this actual occupancy and the target matrix, i.e., the ideal occupancy.

It is true that Tonisson does not use the terms "actual occupancy" and "target occupancy" but it is clear that actual occupancy is equivalent to Tonisson's actual percentage of time spent by agents in handling calls and target occupancy is equivalent to Tonisson's optimum, or ideal, percentages indicative of the percentage of time agents should be spending in the handling of calls.

For the reasons <u>supra</u>, we will sustain the rejection of claim 38 under 35 U.S.C. § 102 (e).

In the reply brief, for the first time, appellants make the point that calls are assigned not simply on the difference between an actual occupancy and a target occupancy but, rather, on the "largest" relative difference between an actual occupancy and a target occupancy because this "allows for better control of the call queue by allowing for a relative constant number of agents to be assigned to the queue" [reply brief-page 3]. While this term may be found in independent claims 1, 14 and 27, appellants have indicated that all claims will stand or fall together, i.e., "the claims be grouped together." (principal brief-page 3). Therefore, we chose to look at the broadest independent claim, claim 38, and the term "largest" does not appear therein. Accordingly, whatever significance this term may or may not have in distinguishing over the applied reference, it is not a claim recitation of the claims, as "grouped together."

However, because we think that it is clear that Tonisson does not teach or suggest assigning a call to an agent with the "largest" relative difference "between an actual occupancy..and the target occupancy...," it does not seem fair to penalize appellants in this case for grouping the claims together when the "largest" limitation was, in fact, argued and it is clear that the reference does not teach this limitation.

Accordingly, we will not sustain the rejection of claims 1-37 under 35 U.S.C. § 102 (e).

The examiner's decision is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal

may be extended under 37 CFR § 1.136(a).

<u>AFFIRMED-IN-PART</u>

JAMES D. THOMAS   )
Administrative Patent Judge   )
)
)
)
)
) BOARD OF PATENT
ERROL A. KRASS   )   APPEALS
Administrative Patent Judge   )   AND
) INTERFERENCES
)
)
)
LANCE-LEONARD BARRY   )
Administrative Patent Judge   )

eak/vsh

8

JON P CHRISTENSEN
WELSH & KATZ LTD
120 SOUTH RIVERSIDE PLAZA
22ND FLOOR
CHICAGO, IL 60606